SUBJECT REQUIREMENT

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PART D PROCESS INFORMATION

This part should include details of (1) the storage and/or treatment process(s), and (2) each hazardous waste unit to be utilized for these processes. Provide the technical design calculations, drawings and specifications for every process and unit. All design information submitted must be certified by a professional engineer registered in the Commonwealth of Kentucky.

D-6 <u>Landfill Design</u> 401 KAR 34:230 and 38:210

D-6a Exposure Assessment 401 KAR 38:070 Section 9

Permit applications for landfills submitted after November 8, 1984, must be accompanied by an assessment of the potential for the public to be exposed to hazardous wastes or hazardous substances released from these units. The exposure assessment at a minimum must contain the following information:

- reasonably foreseeable potential releases from both normal operations and incidents at the unit, including releases associated with transportation to or from the unit
- the potential pathways of human exposure to hazardous wastes or constituent resulting from the releases described under paragraph (1): and
- the potential magnitude and nature of the human exposure resulting from such releases.

D-6b Wastes to be Landfilled

A list of all hazardous wastes to be placed in each landfill cell. Applicant should include:

- Quantity of each waste
- Chemical and physical analysis and a Waste Analysis
 Plan as described in Items C-1 and C-2, respectively
- Information on ignitability, reactivity, and incompatibility as described in Items F-5k and F-51
- 401 KAR 31:170 constituents, compatibility of liner, and waste/leachate

D-6c Surveying and Recordkeeping 401 KAR 34:230 Section 5

Description of surveying and recordkeeping procedures including a map to be used to show:

- Exact location and dimensions of each cell
- Surveyed benchmarks
- Contents of each cell
- Location of each waste type within the cell

D-6d <u>Liner System Design and Construction</u> 401 KAR 34:230 Section 2(1)(a)

Two (2) liners are required for each new landfill, each new

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landfill unit at an existing facility, each replacement of an existing landfill unit and each lateral expansion of an existing landfill unit. 401 KAR 34:230 Section 2(3).

Detailed plans and an engineering report (except for existing portions of the landfill) describing:

- Material of construction
- Chemical properties
- Physical strength
- Thickness
- Foundation design/integrity
- Area covered
- Location relative to high water table
- Liner/waste compatibility
- Settlement potential
- Prevention of waste migration

D-6e <u>Liner System Integrity</u>

Detailed plans and an engineering report describing how liner system integrity will be maintained against:

- Internal and external pressure gradients
- Contact with waste/leachate
- Climatic conditions
- Installation stresses and procedures
- Daily operational stresses

D-6f <u>Leachate Collection and Removal System</u> 401 KAR 34:230 Section 2(1)(b)

For facilities that are required to be double lined, a leachate collection system is required between the liners, in addition to the leachate collection system above the top liner. 401 KAR 34:230 Section 2(3).

Detailed plans and an engineering report describing (except for existing portions of landfill):

- How the system will be designed and operated to maintain less than one foot of leachate immediately above the liner
- Materials of construction
- Chemical resistance to waste/leachate
- Sufficient strength to prevent collapse
- Provisions to prevent clogging

D-6g Run-On Control System 401 KAR 34:230 Section 2(7)

Detailed plans and an engineering report describing:

- Run-on control system capable of preventing run-on to the active portion(s) of the landfill during peak discharge from a 25 year storm
- Sizing, design, and installation of system
- Maintenance procedures to ensure long-term structural integrity and timely repairs

LOCATION IN APPLICATION SUBJECT REQUIREMENT **COMMENTS** Run-Off Control System 401 KAR 34:230 Section 2(7) D-6h Detailed plans and an engineering report describing: Run-off control system designed to collect and control water volume from a 24 hour, 25 year storm Sizing, design, and installation of system Maintenance procedures to ensure long-term structural integrity and timely repairs Units Associated with Run-On, and Run-Off Control Systems D-6i Detailed plans and an engineering report describing: Collection and holding facilities (e.g., tanks, basins) associated with run-on, and run-off control systems How the holding facilities will be managed and operated to maintain design capacity after storms Particulate Control D-6j If landfill contains particulate matter, plans describing how wind dispersal of particulates from a landfill, will be controlled. D-6k Bulk or Non-containerized Free Liquids 401 KAR 34:230 Section 9 Landfill of bulk or non-containerized liquids is prohibited. Disposal of Small Containers in Overpacked Drums 401 KAR 34:230 Section 11 Materials, design of inside container Compatibility of inside container with waste Tightly sealed DOT specifications for both inside container and overpack Compatibility of absorbent material with waste D-6m Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027 in Landfills Documentation of compliance with 401 KAR 34:230 Section 12 D-6n Land Disposal Restrictions 401 KAR 38:090 Section 2(21) Documentation of compliance with 401 KAR Chapter 37. A copy of the notices of approval for any extensions or petitions granted under 401 KAR 37:010